

LISTING OF THE CLAIMS

What is claimed is:

1. (Original) A centralized maintenance parts management system comprising:
 - a warehouse facility for storing, in a centralized manner, a maintenance part for a plurality of types of machines located at a plurality of plants;
 - a necessary parts management device for managing information about whether said maintenance part is necessary for said machines; and
 - a parts shipment management device for specifying a maintenance part to be shipped from said warehouse facility based on said management information in said necessary parts management device.

2. (Original) The centralized maintenance part management system as described in claim 1, further comprising an order management device for determining a maintenance part to be ordered and a quantity thereof based on inventory information of said maintenance part to be ordered in said warehouse facility or based on said management information in said necessary parts management device.

3. (Original) The centralized maintenance part management system as described in claim 2, wherein:
 - said order management device allows input of a target value for a total price of said maintenance part stored in said warehouse facility; and
 - when determining said quantity of said maintenance part to be ordered, said quantity of said maintenance part to be ordered is reduced according to set conditions so that said total price of said maintenance part stored in said warehouse facility approaches said target value.

4. (Original) The centralized maintenance part management system as described in claim 2, wherein:
 - said order management device estimates a quantity of a maintenance part needed based on at least one of a change in a quantity of said maintenance part to be shipped from said warehouse

facility, a change in a maintenance inspection of said machines, and a change in an operating status of said machines; and

 said order management device determines said maintenance part to be ordered and said quantity thereof.

5. (Original) The centralized maintenance part management system as described in claim 1, further comprising an inspection period management device for storing information relating to periodic inspection periods for said machines, wherein

 when there is a new machine to be managed in one of said plants, said inspection period management device uses said information relating to said periodic inspection periods for said machines to determine a periodic inspection period for said machine to be newly managed that is offset from said periodic inspection periods of said machines.

6. (Original) The centralized maintenance part management system as described in claim 1, wherein said necessary parts management device stores and maintains plant-by-plant inventory information indicating a quantity of said maintenance part stored in said plurality of plants and uses said plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

7. (Original) The centralized maintenance part management system as described in claim 1, wherein, said parts shipment management device determines a plurality of maintenance parts to be shipped successively as a maintenance inspection progresses, when a single machine needs said maintenance parts to be shipped successively during said maintenance inspection.

8. (Original) The centralized maintenance part management system as described in claim 1, wherein said warehouse facility is an automated warehouse.

9. (Original) The centralized maintenance part management system as described in claim 3, wherein:

said order management device estimates a quantity of a maintenance part needed based on at least one of a change in a quantity of said maintenance part to be shipped from said warehouse facility, a change in a maintenance inspection of said machines, and a change in an operating status of said machines; and

 said order management device determines said maintenance part to be ordered and said quantity thereof.

10. (Original) The centralized maintenance part management system as described in claim 2, further comprising an inspection period management device for storing information relating to periodic inspection periods for said machines, wherein

 when there is a new machine to be managed in one of said plants, said inspection period management device uses said information relating to said periodic inspection periods for said machines to determine a periodic inspection period for said machine to be newly managed that is offset from said periodic inspection periods of said machines.

11. (Original) The centralized maintenance part management system as described in claim 3, further comprising an inspection period management device for storing information relating to periodic inspection periods for said machines, wherein

 when there is a new machine to be managed in one of said plants, said inspection period management device uses said information relating to said periodic inspection periods for said machines to determine a periodic inspection period for said machine to be newly managed that is offset from said periodic inspection periods of said machines.

12. (Original) The centralized maintenance part management system as described in claim 4, further comprising an inspection period management device for storing information relating to periodic inspection periods for said machines, wherein

 when there is a new machine to be managed in one of said plants, said inspection period management device uses said information relating to said periodic inspection periods for said

machines to determine a periodic inspection period for said machine to be newly managed that is offset from said periodic inspection periods of said machines.

13. (Original) The centralized maintenance part management system as described in claim 2, wherein said necessary parts management device stores and maintains plant-by-plant inventory information indicating a quantity of said maintenance part stored in said plurality of plants and uses said plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

14. (Original) The centralized maintenance part management system as described in claim 3, wherein said necessary parts management device stores and maintains plant-by-plant inventory information indicating a quantity of said maintenance part stored in said plurality of plants and uses said plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

15. (Original) The centralized maintenance part management system as described in claim 4, wherein said necessary parts management device stores and maintains plant-by-plant inventory information indicating a quantity of said maintenance part stored in said plurality of plants and uses said plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

16. (Original) The centralized maintenance part management system as described in claim 5, wherein said necessary parts management device stores and maintains plant-by-plant inventory information indicating a quantity of said maintenance part stored in said plurality of plants and uses said plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

17. (Original) The centralized maintenance part management system as described in claim 2, wherein, said parts shipment management device determines a plurality of maintenance parts to be shipped successively as a maintenance inspection progresses, when a single machine needs said maintenance parts to be shipped successively during said maintenance inspection.

18. (Original) The centralized maintenance part management system as described in claim 3, wherein, said parts shipment management device determines a plurality of maintenance parts to be shipped successively as a maintenance inspection progresses, when a single machine needs said maintenance parts to be shipped successively during said maintenance inspection.

19. (Original) The centralized maintenance part management system as described in claim 4, wherein, said parts shipment management device determines a plurality of maintenance parts to be shipped successively as said maintenance inspection progresses, when a single machine needs said maintenance parts to be shipped successively during said maintenance inspection.

20. (Original) The centralized maintenance part management system as described in claim 5, wherein, said parts shipment management device determines a plurality of maintenance parts to be shipped successively as a maintenance inspection progresses, when a single machine needs said maintenance parts to be shipped successively during said maintenance inspection.

21. (Original) The centralized maintenance part management system as described in claim 6, wherein, said parts shipment management device determines a plurality of maintenance parts to be shipped successively as a maintenance inspection progresses, when a single machine needs said maintenance parts to be shipped successively during said maintenance inspection.

22. (Original) A method of using a centralized maintenance part management system comprising the steps of:

storing in a warehouse facility, in a centralized manner, a maintenance part for a plurality of types of machines located at a plurality of plants;

managing information about whether said maintenance part is necessary for said machines; and

specifying a maintenance part to be shipped from said warehouse facility based on said management information.

23. (Original) The method of using the centralized maintenance part management system according to claim 22, further comprising the step of:

determining a maintenance part to be ordered and a quantity thereof based on inventory information of said maintenance part to be ordered in said warehouse facility or based on said management information.

24. (Original) The method of using the centralized maintenance part management system according to claim 23, further comprising the steps of:

inputting a target value for a total price of said maintenance part stored in said warehouse facility; and

determining said quantity of said maintenance part to be ordered, said quantity of said maintenance part to be ordered is reduced according to set conditions so that said total price of said maintenance part stored in said warehouse facility approaches said target value.

25. (Original) The method of using the centralized maintenance part management system according to claim 23, further comprising the steps of:

estimating a quantity of a maintenance part needed based on at least one of a change in a quantity of said maintenance part to be shipped from said warehouse facility, a change in a maintenance inspection of said machines, and a change in an operating status of said machines; and

determining said maintenance part to be ordered and said quantity thereof.

26. (Original) The method of using the centralized maintenance part management system according to claim 22, further comprising the steps of:

storing information relating to periodic inspection periods for said machines; and

when there is a new machine to be managed in one of said plants, using said information relating to said periodic inspection periods for said machines to determine a periodic inspection period for said machine to be newly managed that is offset from said periodic inspection periods of said machines.

27. (Original) The method of using the centralized maintenance part management system according to claim 22, further comprising the steps of:

storing and maintaining plant-by-plant inventory information indicating a quantity of said maintenance part stored in said plurality of plants; and

using said plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

28. (Original) The method of using the centralized maintenance part management system according to claim 22, further comprising the step of:

determining maintenance parts to be shipped successively as a maintenance inspection progresses, when a single machine needs a plurality of said maintenance parts to be shipped successively during said maintenance inspection.

29. (New) A maintenance part central control system comprising:

a warehouse facility where maintenance parts for a plurality of types of machinery that are present in a plurality of plants are centrally stocked;

a necessary-parts control apparatus that controls requirement conditions for said maintenance parts of said machinery and provides control information;

a parts shipping control apparatus that specifies said maintenance parts to be shipped from said warehouse facility based on the control information of said necessary-parts control apparatus; and

an order control apparatus that specifies the maintenance parts and quantities thereof to be ordered based on storage information about said maintenance parts in said warehouse facility, or based on the control information of said necessary-parts control apparatus;

wherein said order management apparatus is configured such that the maintenance parts and quantities thereof to be ordered are specified by estimating a necessary quantity of said maintenance parts based on fluctuations of the quantity of said maintenance parts shipped from said warehouse

facility, on fluctuations of maintenance inspection frequency of said machinery, or on fluctuations of operational status of said machinery; and

 said order management apparatus is configured to be able to set and input a target value of a total price of said maintenance parts to be stocked at said warehouse facility, and is configured such that, when specifying the quantity of said maintenance parts to be ordered, the quantity of said maintenance parts to be ordered decreases as the total price of said maintenance parts stocked in said warehouse facility approaches said target value based on set conditions; and

 said necessary parts control apparatus is configured such that stock information classified by plant indicating the quantities of said maintenance parts that are stocked in said multiple plants is stored in memory, and is configured such that said stock information classified by plant is used in determining said maintenance part requirement conditions.

30. (New) The maintenance part central control system of claim 29, further comprising an inspection period management apparatus that memorizes periodic inspection time information of said machinery, and that, when machinery is newly targeted for control at any plant, specifies a periodic inspection time of the machinery newly targeted for control in a manner staggered with a periodic inspection time of existing machinery based on the periodic inspection time information of the existing machinery.

31. (New) The maintenance part central control system of claim 29, wherein said parts shipping control apparatus is configured such that when multiple maintenance parts are necessary for a maintenance inspection of a machine, said maintenance parts that should be shipped are specified sequentially as said maintenance inspections progress based on data indicating a relationship between the necessary maintenance parts and previously memorized maintenance inspection progress levels.

32. (New) The maintenance part central control system of claim 29, wherein said warehouse facility comprises an automated warehouse.